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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,486	06/23/2005	Yuuichi Nishikouji	052523	3545

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EXAMINER	
NGUYEN, LAUREN	

ART UNIT	PAPER NUMBER
2871	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/540,486	NISHIKOUJI ET AL.	
	Examiner	Art Unit	
	LAUREN NGUYEN	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *5,8,16 and 18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,7,9-15,17,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/11/2008 has been entered.

Response to Amendment

2. Applicant's arguments filed 02/11/2008 have been fully considered but they are not persuasive.

3. The applicant argues (see page 13) regarding the amended **claim 1** that Kim describes that positive or negative a-plate compensation films 601 and 602 individually exhibit the reciprocal wavelength dispersion characteristics and Kim neither describes nor suggests the wavelength dispersion characteristics that are obtained when the compensation film and another compensation film are laminated together. This is not persuasive. Kim (in at least paragraph 0037; figure 1A) discloses an in-plane retardation of the birefringent optical film (601 or 602) has reciprocal wavelength dispersion characteristics**.** Since the C-plate has minimal effect on the total in-plane retardation of the birefringent optical film, the reciprocal wavelength dispersion characteristics of the A plate is the reciprocal wavelength dispersion characteristics of the birefringent optical film.

4. The applicant argues (see page 14) regarding the amended **claim 1** that "the birefringent optical film of the present invention has reciprocal wavelength dispersion characteristics, so that

an unexpected and advantageous effect that display coloring can further be prevented." This is irrelevant and not persuasive, since **claim 1** is now rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim et al.** in view of **Aida et al.**.

5. Applicant's arguments with respect to **claim 1** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 1, 3, 6-7, 10-13, 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim et al. (US 2006/0098145)** in view of **Aida et al. (US 5,093,739)**.

8. With respect to **claim 1**, **Kim et al.** (figure 1A) discloses birefringent optical film comprising: at least one birefringent A-layer (601 or 602); and at least one birefringent B-layer (701 or 702), wherein the birefringent optical film is capable of being used for viewing-angle compensating films for VA mode liquid crystal displays (see at least paragraph 0032), the birefringent A-layer has a property satisfying $n_{y_a} \geq n_{z_a} > n_{x_a}$ *or* $n_{z_a} > n_{x_a} > n_{y_a}$ and the birefringent B-layer has a property satisfying $n_{x_b} \geq n_{y_b} > n_{z_b}$, and the birefringent B-layer has a property satisfying nXb >__ nyb > nZb, and an in-plane retardation of the birefringent optical film has reciprocal wavelength dispersion characteristics (in at least paragraph 0037; since the C-plate has minimal effect on the total in-plane retardation of the birefringent optical

film, the reciprocal wavelength dispersion characteristics of the A plate is the reciprocal wavelength dispersion characteristics of the birefringent optical film). **Aida et al.** (in at least figure 3, column 3, lines 33-36 and 61-64) discloses the birefringent B-layer is formed of a polymer exhibiting positive birefringence (102, see at least column 3, lines 33-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the birefringent film as taught by **Aida et al.** because such modification would decrease the synthetic viewing angle dependency (see at least column 3, lines 38-43).

9. With respect to **claim 3**, **Kim et al.** discloses the limitations as shown in the rejection of **claim 1** above. **Kim et al.** does not disclose the birefringent A-layer is formed of at least one of a polymer exhibiting negative birefringence and a polymer exhibiting positive birefringence. However, **Aida et al.**, in at least figure 3, column 3, lines 33-36 and 61-64, discloses the birefringent A-layer is formed of a polymer exhibiting negative birefringence (103, see at least column 3, lines 34-36). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the birefringent A-layer and B-layer of the combination of **Kim et al.** as taught by **Aida et al.** because such modification would decrease the synthetic viewing angle dependency (see at least column 3, lines 38-43).

10. With respect to **claim 6**, **Aida et al.** discloses the polymer exhibiting positive birefringence is polyester (see at least column 4, lines 46-50).

11. With respect to **claim 7**, **Kim et al.** (figure 1A) discloses the birefringent optical film meeting a requirement represented by $-3^{o} \leq \textit{alignment axis accuracy} \leq 3^{o}$ (see at least paragraph 0136).

12. With respect to **claim 10**, **Kim et al.** (figure 1A) discloses a laminated polarizing plate comprising a birefringent optical film wherein the birefringent optical film is the birefringent optical film according to claim 1 (see at least paragraph 0030).

13. With respect to **claim 11**, **Kim et al.** (figure 1A) discloses a liquid crystal panel comprising a liquid crystal cell (100-300) and an optical member (figure 1A), the optical member being disposed on at least one surface of the liquid crystal cell, wherein the optical member is the birefringent optical film according to claim 1 or a laminated polarizing plate comprising the birefringent optical film according to claim 1.

14. With respect to **claim 12**, **Kim et al.** (figure 1A) discloses a liquid crystal display comprising a liquid crystal panel, wherein the liquid crystal panel is the liquid crystal panel according to claim 11.

15. With respect to **claim 13**, **Kim et al.** (figure 1A) discloses an image display comprising the birefringent optical film according to claim 1.

16. With respect to **claim 15**, **Kim et al.** (figure 1A) discloses the birefringent optical film according to claim 1, comprising one birefringent A-layer (601 or 602) and one birefringent B-layer (701 or 702).

17. **Claims 2 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim et al. (US 2006/0098145)** in view of **Aida et al. (US 2003/0164920),** and further in view of **Sakamoto et al. (US 2003/0125503)**.

18. With respect to **claim 2**, the combination of **Kim et al./Aida et al.** discloses the limitations as shown in the rejection of **claim 1** above. The combination of **Kim et al./Aida et al.** does not disclose the birefringent B-layer meets a requirement represented by

$0.005 \leq \Delta n_b \leq 0.2$. However, **Sakamoto et al.**, in at least paragraph 0026, lines 15-20, discloses the birefringent B-layer meets a requirement represented by $0.004 \leq \Delta n_b \leq 0.6$. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the birefringent B-layer of the combination of **Kim et al./Aida et al.** with the teaching of **Sakamoto et al.** because such modification would "ease the controlling of the film thickness at the time of attaching to a liquid crystal display device to obtain a retardation value" (see at least paragraph 0026, lines 24-28).

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2144.05

19. With respect to **claim 17**, the combination of **Kim et al./Aida et al.** discloses the limitations as shown in the rejection of **claim 1** above. The combination of **Kim et al./Aida et al.** does not disclose the birefringent B-layer is formed of at least one polymer selected from the group consisting of polyamide, polyimide, polyetherketone, polyaryletherketone, polyamide imide and polycsterimide, and the thickness of the birefringent B-layer is 0.1 to 30 microns. However, **Sakamoto et al.**, in at least paragraphs 0028 and 0038, discloses the birefringent B-layer is formed of at least one polymer selected from the group consisting of polyamide and polyimide, and the thickness of the birefringent B-layer is 0.1 to 30 microns. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the birefringent B-layer of the combination of **Kim et al./Aida et al.** with the teachings of **Sakamoto et al.** because such modification would secure excellent functions for an optical film and achieve an optical film with sufficient uniformity.

> In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2144.05

16. **Claims 4 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim et al. (US 2006/0098145)** in view of **Aida et al. (US 2003/0164920),** and further in view of **Kuwabara et al. (5,875,014).**

17. With respect to **claims 4 and 14**, the combination of **Kim et al./Aida et al.** discloses the limitations as shown in the rejection of **claim 3** above. The combination of **Kim et al./Aida et al.** does not disclose the birefringent A-layer is formed of a mixture of the polymer exhibiting negative birefringence and the polymer exhibiting positive birefringence (**claim 4**) and the polymer exhibiting negative birefringence and the polymer exhibiting positive birefringence contained in the mixture for forming the birefringent A-layer are compatible with each other (**claim 14**). However, **Kuwabara et al.**, in at least column 5, lines 14-20, discloses the birefringent A-layer is formed of a mixture of the polymer exhibiting negative birefringence and the polymer exhibiting positive birefringence (**claim 4**; see at least column 5, lines 16-18) and the polymer exhibiting negative birefringence and the polymer exhibiting positive birefringence contained in the mixture for forming the birefringent A-layer are compatible with each other (**claim 14**; see at least column 5, lines 40-43). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the birefringent A-layer as taught by **Kuwabara et al.** because such modification would achieve an excellent black-and-white display of a liquid crystal display device apparatus (see at least column 2, lines 35-38).

18. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim et al. (US 2006/0098145)** in view of **Aida et al. (US 2003/0164920),** and further in view of **Kaneko et al. (US 6,693,692).**

19. With respect to **claim 9**, the combination of **Kim et al./Aida et al.** discloses the limitations as shown in the rejection of **claim 1** above. The combination of **Kim et al./Aida et al.** does not disclose the birefringent optical film meeting requirements represented by: $\left|\Delta_{nd_a}\right| \geq \left|\Delta_{nd_b}\right|$ and $\alpha_a < \alpha_b$. However, **Kaneko et al.**, in at least column 15, lines 35-39 and lines 60-64, figure 8, 9-11, and 16, discloses $\left|\Delta_{nd_a}\right| \geq \left|\Delta_{nd_b}\right|$ and (curve 32 of the birefringent A-layer > curve 31 of the birefringent B-layer).

$$\alpha_a < \alpha_b \Rightarrow \frac{\Delta_{nd_{a430nm}}}{\Delta_{nd_{a550nm}}} < \frac{\Delta_{nd_{b430nm}}}{\Delta_{nd_{b550nm}}} \Rightarrow \frac{0.52}{0.5} < \frac{0.4}{0.38} \Rightarrow 1.04 < 1.53 \text{ (figure 16)}$$

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the birefringent optical film as taught by **Kaneko et al.** because such modification would change the polarization state at every wavelength and provide an excellent black display (see at least column 0015, lines 45-47; and column 16, lines 21-25).

20. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim et al. (US 2006/0098145)** in view of **Aida et al. (US 2003/0164920),** and further in view of **Van De Witte et al. (US 6,437,843).**

21. With respect to **claim 19**, the combination of **Kim et al./Aida et al.** discloses the limitations as shown in the rejection of **claim 1** above. The combination of **Kim et al./Aida et al.** does not disclose the birefringent A-layer has a property satisfying nya>nza>nxa. However, **Van De Witte et al.**, in at least column 4, lines 30-35, discloses the birefringent A-layer has a

property satisfying nya>nza>nxa. Because the combination of **Kim et al./Aida et al. and Van De Witte et al. (US 6,437,843)** teaches the birefringent optical film, it would have been obvious to one skilled in the art to substitute one birefringent layer for the other to achieve the predictable result of producing a birefringent optical film.

22. **Claim 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kim et al. (US 2006/0098145)** in view of **Aida et al. (US 2003/0164920),** and further in view of **VanderPloeg et al. (US 6,567,143).**

23. With respect to **claim** 20, the combination of **Kim et al./Aida et al.** discloses the limitations as shown in the rejection of **claim 1** above. The combination of **Kim et al./Aida et al.** does not disclose the birefringent B-layer has a property satisfying nxb>nyb>nzb. However, **VanderPloeg et al.**, in at least column 8, lines 49-56, discloses the birefringent B-layer has a property satisfying nxb>nyb>nzb. Because the combination of **Kim et al./Aida et al. and Van De Witte et al. (US 6,437,843)** teaches the birefringent optical film, it would have been obvious to one skilled in the art to substitute one birefringent layer for the other to achieve the predictable result of producing a birefringent optical film.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lauren Nguyen whose telephone number is (571) 270-1428. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. N./

Examiner, Art Unit 2871

/Andrew Schechter/

Primary Examiner, Art Unit 2871